

# Attachment 7. Program Preferences

## **7.1 PROJECT 1: City of Susanville Sustainable Water Supply and Conjunctive Use Project**

The replacement of the Johnstonville Water Main and Harris Tank Water Line which are currently the City's highest maintenance priority. The Johnstonville Water Main currently leaks 4.3 MG annually and the Harris Tank Line 1.5 MG annually as per the City's Public Works Director report. Both lines are covered in repair bands and are in ill repair.

The proposed project will increase the City's capacity to capture more spring water. The existing gravity flow line is an open channel flow, 14" steel pipe. It has a maximum capacity of approximately 1,100 gallons per minute. At this time, it is estimated that 500 to 800 gallons per minute of spring water is not collected and is lost to beneficial use.

The project addresses a number of project type categories. This Sustainable Water Supply and Conjunctive Use Project will promote water conservation, and conjunctive use. The project promotes water conservation by actively addressing system inefficiencies and conserving water through the replacement of leaky deteriorated pipes and reduction of risk of water main breaks. The project will achieve long term reduction of water use as a result of a more efficient Cady Springs collection system and the installation of new infrastructure that substantially decreases losses in the City's water delivery system. This project will provide immediate regional drought preparedness by decreasing the demand on the water supply by decreasing losses and increasing system efficiency.

The project increases supply reliability and delivery of safe drinking water by replacing deteriorated, aging systems prone to collapse that could introduce harmful sediments into the water supply. Also ensures that minimum flows for fire protection are met. The project protects water quality by eliminating leaks, and reducing the risk of pipeline failure with associated soil erosion and potential sedimentation of nearby streams.

This project achieves the following Statewide Priorities from Table 1 of the 2015 IRWM Guidelines:

- Contain projects that address safe drinking water and wastewater treatment needs of DACs
- Increase the participation of small and disadvantaged communities in the IRWM process
- Develop multi-benefit projects with consideration of affected disadvantaged communities and vulnerable populations
- Adaptation to Climate Change: Water management system modifications that address anticipated climate
- Adaptation to Climate Change: Advance and expand conjunctive management of multiple water supply sources
- Increase urban and agricultural water use efficiency measures such as conservation and recycling
- Achieve long term reduction of water use
- Efficient groundwater basin management
- Promote water conservation, conjunctive use, reuse and recycling

By replacing critical water supply lines the region can increase its water supply reliability and water affordability, which will help meet the Region's effort to meet the Human Right to Water Policy.

## **7.2 PROJECT 2: Spalding Community Service District Closure of Wastewater Retention Pond**

When the Spalding Community Service District wastewater system was created in the early 2000's, the engineers considered the number of building sites in the District and the potential for the 100 year flood. The three pond system was created to evaporate the effluent that was being distributed from the housing units to the ponds. Two five acre and one seven acre pond was created to take care of the community need. As has been shown over the past eight years, the system was over engineered. Our typical effluent collection is about 5 million gallons per year. This is only about one third of what it was meant to handle. This means that the poly liners that line the three ponds do not have ballast to keep them in place. And with the severe winds that we can experience in the high desert, they are in danger of being lifted and damaged.

To resolve the lifting issue, a commercial well was drilled at the pond location so that water could be pumped into the ponds for ballast as needed. Typically, when the well is used, we pump approximately 500,000 gallons per day of ground water.

In order to keep this pond still operational as an overflow pond but not an active wastewater retention pond, the Spalding CSD would like to install a permanent ballast system. This in turn would save the district valuable groundwater resources as well as the power to operate the commercial pump.

The 12" diameter fabricated reinforced polypropylene tube filled with 110 PCF concrete will have a project life of 50 years. The pond liner will need to be replaced before the concrete ballast will. The new permanent ballast system will save over 5 million gallons annually and 250 million gallons (767 acre feet) over its project life. The project promotes water conservation by actively addressing system inefficiencies and conserving water through the replacement of the water ballast system.

This project achieves the following Statewide Priorities from Table 1 of the 2015 IRWM Guidelines:

- Promote water conservation, conjunctive use, reuse and recycling
- Improve landscape and agricultural irrigation efficiencies
- Achieve long term reduction of water use
- Efficient groundwater basin management
- System inerties
- Increase urban and agricultural water use efficiency measures such as conservation and recycling
- Adaptation to Climate Change: Use and reuse water more efficiently
- Adaptation to Climate Change: Water management system modifications that address anticipated climate
- Reduce Energy Consumption: Water use efficiency
- Reduce Energy Consumption: Water system energy efficiency
- Expand environmental stewardship to protect and enhance the environment by improving watershed, floodplain, and instream functions and to sustain water and flood management ecosystems
- More sustainable flood and water management systems
- Increase the participation of small and disadvantaged communities in the IRWM process

A number of the wells in the Spalding Tract have gone dry. Some people have re-drilled their wells to deeper levels. There are a number of people who cannot afford such an effort. Groundwater levels need to be sustained at the very least. This project will help meet the Region's effort to meet the Human Right to Water Policy

### **7.3 LL&TT Lassen Land & Trails Trust Municipal Water Assessment**

The Lassen County Small Water System Assessment will provide direct water-related benefits to a DAC and will not complete any construction during this phase. Planning and design work is critical for the long-term sustainability of these water systems and to ensure that these communities have access to a reliable source of water during sustained drought conditions, and that this water is safe and high quality. The expected physical benefits of Phase II, the construction phase, would be an increase in the amount of water supply produced, saved, and recycled; and the types and amounts of water quality improvement provided, and the amount of water treated and improved. Lassen Land & Trails Trust (Trust) is now the owner of the municipal water systems of the communities of Ravendale and Madeline which were acquired as part of the purchase of the abandoned Modoc Line, now managed as a multi-use recreation trail known as the Modoc Line Rail Trail (MLRT).

Union Pacific sent a letter to the water users in the town of Wendel in July 2015, letting them know that they would be terminating service, leaving it up to the users to find another source of water. Lassen Land & Trails Trust has been working closely with the communities of Ravendale and Madeline to ensure that this does not happen to those towns, and that they continue to have access to a safe and reliable source of water. In turn, this project will help meet the Region's effort to meet the Human Right to Water Policy